



Appl. No. 10/005,647
Amdt. Dated October 4, 2004
Reply to Office Action of May 4, 2004
REPLACEMENT SHEET

Fig. 1

TGGTTGTCCTGGAACCTCACTCTGTAGACCAGGCTGGCCATGAACTCACAGA
GATCTACCTCCTGAGTGCTGGGATTAAAGGTTTGTGCCACCACCTCCCAAC
TCTAAGGTGTTTCTTTAAGTTAGGGGCATAGTAAACATTGTTGAGATACTA
GAGGAACACTGAATGAAAATTTGGACATCTCTGCTTTAGGTTTGTGCTGAG
CAGTTTGCCTCTTATCTTCACCTATGCTGAAAAGTTTGAGTTCATAATTTTG
AACATGCATATGATAAAATATTCTGGCCGCACATTGAATAAATATATTTTAA
ATGAACTTACCTTTAAAATGTCAGTAACAACTCTGCATGGTTTTCTTCTTAC
CTCCATAGGTATGGTCTGAATATGCGTTGTTTGGCAGCTCGGGTCAACTAT
AAGACTTTGATTATCATCTGTGCGCTATTCACTTTGGTCACAGTACTTTTGT
GGAATAAGTGTTCCAGCGACAAAGCAATCCAGTTTCCTCGGCACCTTGAGTA
GTGGATTACAGAGTGGATGGATTAGAAAAAAGATCAGCAGCATCTGAAAGTA
ACCACTATGCCAACCACATAGCCAAACAGCAGTCAGAAGAGGCATTTCTCCTC
AGGAACAACAGAAGGCACCCCCTGTTGTTGGGGGCTTCAATAGCAACGGG
GGAAGCAAGGTGTTAGGGCTCAAATATGAAGAGATTGACTGTCTCATAAAC
GATGAGCACACCATTAAAGGGAGACGAGAGGGGAATGAAGTTTTCTTCCA
TTCACTTGGGTAGAGAAATACTTTGATGTTTATGGAAAAGTGGTCCGAGTA
TGACGGCTATGATCGATTTGAATTC::TCTCATAGCTATTCCAAAGTCTATGCA
CAGAGAGCCCCTTATCACCTGATGGTGTGTTTATGTCCTTTGAAGGCTACAATG
TGGAAGTCCGAGACAGAGTCAAGTGCATAAGTGGGGTTGAAGGTGTACCTTTAT
CTACACAGTGGGGACCTCAAGGCTATTTCTACCCAATCCAGATTGCACAGTATG
GGTTAAGTCACTACAGCAAGAATCTAACTGAAAAACCCCCTCATATAGAGGTAT
ATGAAACAGCAGAAGACAGGGACAAAAACAGCAAGCCCAATGACTGGACTGTG
CCCAAGGGCTGCTTTATGGCTAGTGTGGCTGATAAGTCAAGATTCACCAATGTT
AAACAGTTCATTGCTCCAGAAACCAAGTGAAGGTGTATCCTTGCAACTGGGGAAC
ACAAAAGATTTTATTATTTTCACTTGAACCTCAAGTTCTTAACAAATGGAAGCGTGT
CTGTGGTTCTGGAGACGACAGAAAAGAATCAGCTCTTCACTGTACATTATGTCT
CAAATACCCAGCTAATTGCTTTTAAAGAAAGAGACATATACTATGGCATCGGGC
CCAGAACATCATGGAGCACAGTTACCCGGGACCTGGTCACTGACCTCAGGAAA
GGAGTGGGTCTTTCCAACACAAAAGCTGTCAAGCCAACAAGAATAATGCCCAA



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GAAGGTGGTTAGGTTGATTGCGAAAGGGAAGGGCTTCCTTGACAACATTACCAT
CTCTACCACAGCCCACATGGCTGCCTTCTTCGCTGCCAGTGACTGGCTGGTGAG
GAACCAGGATGAGAAAGGCGGCTGGCCGATTATGGTGACCCGTAAGTTAGGGG
AAGGCTTCAAGTCTTTAGAGCCAGGGTGGTACTCCGCCATGGCCCAAGGGCAAG
CCATTTCTACATTAGTCAGGGCCTATCTCTTAACAAAAGACCATATATTCCTCAA
TTCAGCTTTAAGGGCAACAGCCCCTTACAAGTTTCTGTCAGAGCAGCATGGAGT
CAAGGCTGTGTTTATGAATAAACATGACTGGTATGAAGAATATCCAACCTACACC
TAGCTCTTTTGTTTTAAATGGCTTTATGTATTCTTTAATTGGGCTGTATGACTTAA
AAGAACTGCAGGGGAAAACTCGGGAAAGAAGCGAGGTCCTTGTATGAGCGT
GGCATGGAATCCCTTAAAGCCATGCTCCCCTTGTACGACACTGGCTCAGGAACC
ATCTATGACCTCCGGCACTTCATGCTTGGCATTGCCCCCAACCTGGCCCGCTGGG
ACTATCACACCACCCACATCAATCAACTGCAGCTGCTTAGCACCATTGATGAGT
CCCCAATCTTCAAAGAATTTGTCAAGAGGTGGAAGAGCTACCTTAAAGGCAGCC
GGGCAAAGCACAACTAG

FIGURE 1
CONTINUED

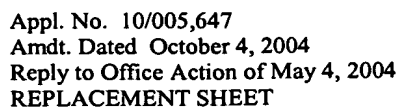


FIG. 4A

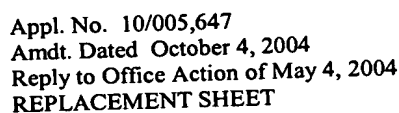
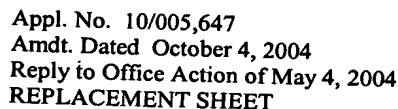


FIG. 4B

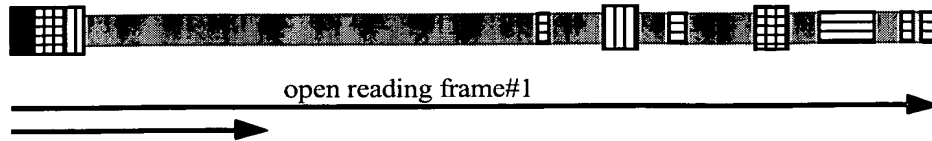
[illegible]



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sig seq-TM
conserved
peptide seq
hotspot

hydrophobic and
conserved peptide seq.
hotspots



Hypothetical orientation, **if** inserted into golgi

cytosol->lumen----->cytosol----->lumen

Key:



signal sequence,
highly hydrophobic
transmembrane (TM)
sequence



Hydrophobic
transmembrane (TM)
or buried sequence



most conserved peptide sequence
(>50% similarity to C elegans 71.9
KD hypothetical protein;
38% similarity to Methanococcus
hypothetical protein). Note:
peptide identity between mouse,
bovine and human > 95%!

FIG. 5



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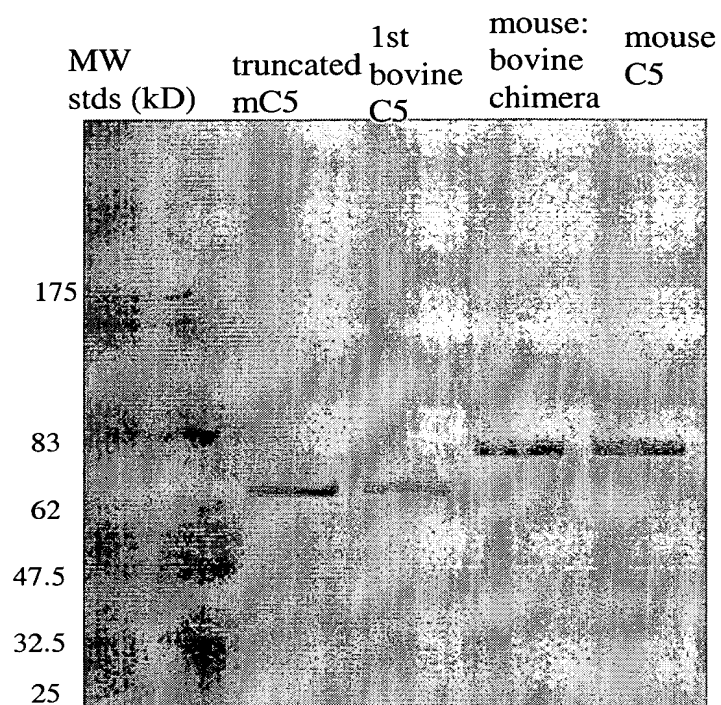


Fig. 9